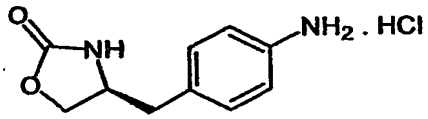
CLAIMS

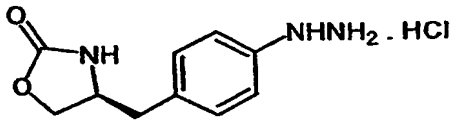
1. Process for preparing a pharmaceutically active compound, zolmitriptan, or a pharmaceutically acceptable salt thereof, **characterised** in that it comprises the following stages:

a) Preparation of the diazononium salt from the aniline hydrochloride of formula (II)



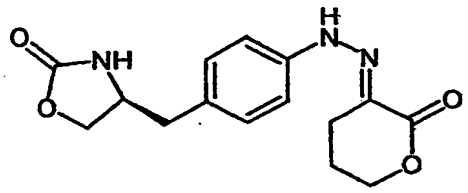
(II)

followed by reduction and acidification to give the hydrazine of formula (III):



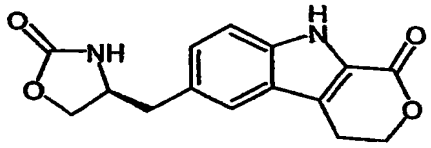
(III)

b) *In situ* reaction of the hydrazine hydrochloride of formula (III) with α-keto-δ-valerolactone, to give the hydrazone of formula (IV):



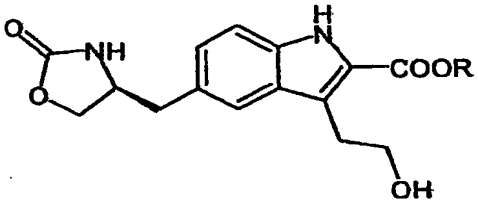
(IV)

c) Fischer indole synthesis of the hydrazone of formula (IV), to give the pyranoindolone of formula (V):



(V)

d) Transesterification of the pyranoindolone of formula (V), to provide the compound of formula (VI):



(VI)

in which R represents a straight or branched C1-C4 alkyl chain;

e) Conversion of the hydroxyl group of the compound of formula (VI) into dimethylamino, to give the indolecarboxylate of formula (VII):

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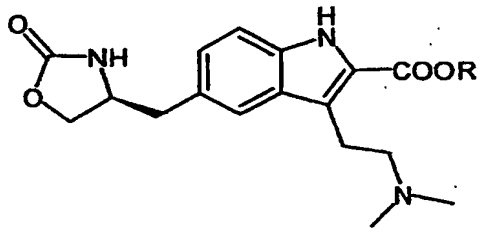
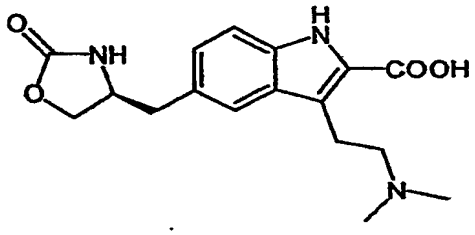


(VII)

in which R represents a straight or branched C1-C4 alkyl chain;

f) Saponification of the 2-carboalkoxy group of the compound of formula (VII), to give the indolecarboxylic acid of formula (VIII):



(VIII)

g) Decarboxylation of the indolecarboxylic acid of formula (VIII), to give zolmitriptan and,

eventually, the preparation of a pharmaceutically acceptable salt thereof.

2. Process as claimed in Claim 1, characterised in that said stage c) is carried out in a solution of dry hydrogen chloride in acetic acid.

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3. Process as claimed in Claim 1, characterised in that said stages c) and d) are carried out in a one pot reaction.

4. Process as claimed in Claim 1 and Claim 3, characterised in that said stages c) and d) are carried out in a solution of dry hydrogen chloride in a straight or branched C1-C4 alcohol chain.

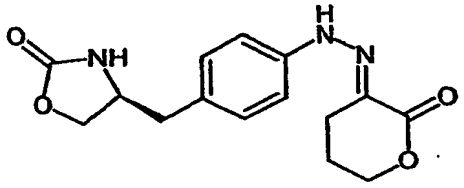
5. Process as claimed in Claim 1, characterised in that said stage e) is carried out in two steps:

e-i) replacement of the hydroxyl group of the compound of formula (VI) by a leaving group X; and

e-ii) subsequent substitution reaction of the leaving group X with dimethylamine to provide the compound of formula (VII).

6. Process as claimed in Claim 5, characterised in that said leaving group X is chosen between an atom of halogen, a mesylate group or a tosylate group.

7. Synthesis intermediate of formula (IV):



(IV)

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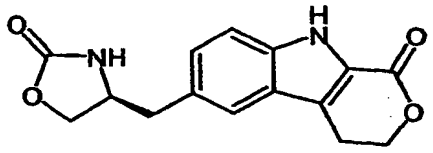
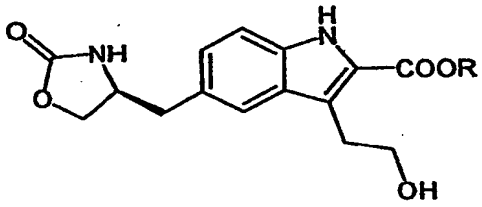
8. Synthesis intermediate of formula (V):



(V)

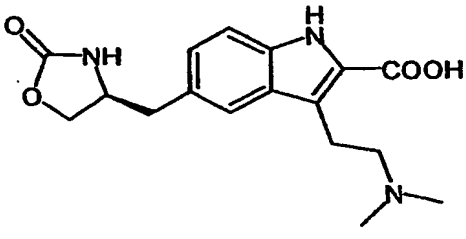
9. Synthesis intermediate of formula (VI):



(VI)

where R represents a straight or branched C1-C4 alkyl chain.

10. Synthesis intermediate of formula (VIII):



(VIII)